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GOVERNMENT OF INDIA

MINISTRY OF COMMERCE

REPORT OF THE
INDIAN TARIFF BOARD

REGARDING THE

CONTINUANCE OF PROTECTION TO THE MAGNESIUM CHLORIDE INDUSTRY

BOMBAY

PRINTED IN INDIA FOR THE MANAGER OF PUBLICATIONS DELHI
BY THE MANAGER GOVERNMENT OF INDIA PRESS SIMLA 1948

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सत्यमेव जयते

Reference to the Board.

The Government of India, Ministry of Commerce, in their Resolution No. 134-T(19)|47, dated 10th April 1948, read with paragraph 2 of the Resolution No. 28-T(6)|46, dated 20th January 1947 referred to the Tariff Board for investigation, among other industries, the case of the magnesium chloride industry which had been established before the war and had been granted tariff protection on the basis of the recommendations made by previous Tariff Boards. The Resolution points out that the protection to the industry which was extended from time to time has been continued for a further period of one year from 1st April 1948 by the Protective Duties Continuation Act, 1948. The Board has been requested to examine in detail the question of continuance of protection to this industry and report whether protection should be continued after 31st March 1949, and if so, to what extent.

Development of the industry.

2. (a) *History.*—Before World War I, magnesium chloride was practically a German monopoly, and India's requirements were almost wholly met by imports from Germany. At Stassfurt in Germany there were large deposits of the mineral known as carnallite, which is a double chloride of potassium and magnesium with traces of bromides and iodides. On the outbreak of the war in 1914, the German supplies were cut off and a serious shortage, accompanied by a marked rise in the price, occurred in this country. In the textile mills, other materials such as calcium chloride were used as substitutes for sizing but they were found to be inferior. A stimulus was thereby given to the investigation of local resources of magnesium chloride. In the year 1915, attention was drawn to the almost unlimited supply of ' bitterns ' (the residual mother liquor left in the salt pans after the sodium chloride or common salt is removed) at Kharaghoda, where the salt works then belonging to the Government of Bombay are situated. It was then estimated that out of these bitterns some 10,000 or 12,000 tons of magnesium chloride of the best quality could be produced annually. Another source of supply of bitterns was located at the salt works at Kuda (10 miles away from Kharaghoda) in the Dhrangadra State. The Government of Bombay first invited tenders in the year 1915 for the right to remove the bitterns from the Kharaghoda salt works. When tenders were again invited in 1916, the Pioneer Magnesia Works, a private company which had then been started obtained the contract. This contract was renewable from year to year ; and from the second year, the company established its factory at Kharaghoda. The

factory then worked under the supervision of the Government Salt Department and in close collaboration with the Director of Industries, Bombay. The Company was exceedingly prosperous during the remaining years of the war, *i.e.*, 1917 and 1918, and for three years thereafter, as prices of magnesium chloride remained high. In 1920, small trial consignments of magnesium chloride were also sent to certain firms in England. These trial consignments were well received and there was every prospect of some firm offers being made. But owing to shipping difficulties it was not possible for the Company to develop the export trade. In 1922, owing to large imports of German magnesium chloride, the price of magnesium chloride dropped rapidly and by the end of the year reached a point which made it necessary to close down the factory. In 1923 and 1924, production ceased and the Company confined itself merely to the gradual disposal of its accumulated stocks. It appeared for a while that the Indian industry faced by this severe competition from Germany might rapidly succumb in spite of the natural advantages enjoyed by it in respect of raw materials and cheap and plentiful labour at Kharaghoda. This, however, did not happen. Costs of production were reduced in several directions and the process of manufacture improved, and subsequently, with the assistance of the revenue duty of 15 per cent. *ad valorem*, the industry was getting firmly established. The production which had been 1,300 tons in 1922 became as much as 2,700 tons in 1927, and practically the whole of the output was disposed of in the Bombay and Ahmedabad markets. But the removal of the revenue duty in September 1927, coupled with a subsequent decrease in the price of the imported magnesium chloride, reduced the industry again to a precarious condition and necessitated a renewal of the application for protection. During the period from May to December 1927, negotiations were conducted with the Pioneer Magnesia Works by the Havero Trading Co., acting on behalf of the German Syndicate, regarding the division of the Indian market and the stabilization of prices at a higher level. The German Syndicate were prepared to come to terms only on the understanding that 70 per cent. of the Indian market was conceded to the German industry thereby limiting the Indian manufacturers to a production of only 1,200 tons per annum. These terms were not accepted by the Indian producers with the result that competition was intensified and import prices came down still further.

(b) *Production.*—The capacity of the Pioneer Magnesia Works was about 3,000 tons a year during the years 1925 to 1927. The Tariff Board of 1925 in its report adopted the figure of 3,000 tons of output as a basis for its estimate of future works costs. By 1932, two other factories, namely, Okha Salt Works and Kuda Salt Works, also started the production of magnesium chloride. The following table shows the production of magnesium chloride in the country from 1916 to 1936 :—

	Production in tons.			
	Pioneer Magnesia Works.	Okha Salt Works.	Kuda Salt Works.	Total.
1916	966	..	..	966
1917	1,145	..	..	1,145
1918	1,845	..	..	1,845
1919	1,822	..	..	1,822
1920	1,477	..	..	1,477
1921	851	..	..	851
1922	1,352	..	..	1,352
1923	Nil	..	..	..
1924	344	..	..	344
1925	1,411	..	..	1,411
1926	1,965	..	..	1,965
1927	2,712	..	..	2,712
1928 (upto Sept.)	2,804	..	..	2,804
1929	3,273	..	..	3,273
1930	4,402	..	..	4,402
1931	5,192	..	..	5,192
1932	6,755	121	697	7,573
1933	5,626	962	1,474	8,062
1934	5,838	1,483	1,005	8,326
1935	5,365	2,025	1,639	9,029
1936	5,536	27*	1,009	6,582

After the inquiry in 1937 by the Tariff Board, there has been an appreciable increase in the indigenous production. The total capacity of the industry at present is 15,000 tons per annum. There are three factories engaged in the manufacture of magnesium chloride ; their respective capacity is as under :—

	Tons.
Pioneer Magnesia Works	10,000
Tata Chemicals (Okha Salt Works)	3,000
Mayurdhwaj Magnesia Works (Kuda Salt Works)	2,000

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*Reduction in output due to dismantling and reorganisation of the plant.

The actual output of these Companies from 1937 onwards is given hereunder :—

(Figures in tons).

Year.	Pioneer Magnesia Works.	Tata Chemicals	Mayurdhwaj Magnesia Works.	Total
1937	6,972	..	..	6,972
1938	5,074	..	..	5,074
1939	6,998	..	..	6,998
1940	5,862	..	..	5,862
1941	5,833	3,008	..	8,841
1942	7,109	522	1,620	9,251
1943	4,517	485	1,665	6,667
1944	408	477	91	976
1945	1,386	1,981	—	3,367
1946	4,506	1,400	192	6,098
1947	5,319	708	240	6,267

(c) *Demand.*—The Indian demand for magnesium chloride was considerably reduced after the promulgation of the Cotton Textiles Sizing and Filling Control Order, 1942, which is still in force. Before the war, the demand was in the neighbourhood of 4,000 tons per annum but the present demand is about 2,000 tons. If the above mentioned Control Order is withdrawn as is likely, there is bound to be a considerable increase in the indigenous demand for the product.

(d) *Scope of development.*—The industry enjoys natural advantages by way of raw materials. The supplies of the raw material, namely, bitterns, are enormous and exceed the entire requirements of the magnesium chloride industry. The process of manufacture as already observed, is a simple one. No elaborate or expensive machinery is required. Conditions are favourable to the industry, as regards labour and the market. Hence there is a wide scope for developing this industry to meet the growing demand both for home consumption and for exports.

Previous Tariff Board Inquiries and history of protection.

3. The first tariff inquiry into the magnesium chloride industry was held in the year 1924. The inquiry arose on an application for protection made by the Pioneer Magnesia Works, Kharaghoda, the only manufacturers who tendered evidence before the Board. The Tariff Board found that, while the first two conditions laid down by the Fiscal Commission for the grant of protection were fulfilled by the industry, the Commission's third condition was not satisfied, that is to say, the applicants had failed in their

attempt to shew that eventually the industry would be able to dispense with protection. The Board, therefore, came to the conclusion that the claim for protection had not been made good by the industry. It pointed out that there was a possibility that the manufacture of magnesium chloride in India might cease if the claim to protection were negatived. The Board felt that even if this happened no important interest would be injured as the company had already received back the value of the investment twice over out of the profits of the prosperous years. The Board also said that it could not be pleaded that the continuance of protection to the industry was necessary on national grounds. Under these circumstances, it pointed out that there was no valid ground for asking the country to incur a sacrifice when there was no assurance of any compensating advantage in the future. Accepting the opinion of the Board, the Government of India rejected the application for protection in 1925. Subsequently, however, 15 per cent. *ad valorem* revenue duty was imposed on the imported magnesium chloride. Moreover, on account of the reduction in the cost of production, the indigenous product was able to compete successfully with the magnesium chloride imported from Germany. By 1927, the Pioneer Magnesia Works doubled its output. But in September 1927 the revenue duty was removed. By this time there was also a reduction in the price of the imported magnesium chloride. These factors weakened the position of the industry and the Pioneer Magnesia Works renewed the application for protection. Government again referred the matter to the Tariff Board in 1929. The Board reviewed the position of the industry, and was satisfied that the industry substantially fulfilled all the conditions for protection laid down by the Fiscal Commission and concluded that it was as much in the interest of the consumer as of the manufacturer that the industry should be reasonably protected. It, therefore, recommended a specific protective duty of 7 annas per cwt. which was equivalent to 15 per cent. *ad valorem*; incidentally, this was also the general rate of revenue duty at the time. The Board also provisionally fixed 7 years as the period for protection and recommended that on the expiry of that period, the question should be re-examined. Government accepted the Board's recommendations and granted protection to the magnesium chloride industry under the Heavy Chemical Industry (Protection) Act, 1931. The protective duty of annas 7 per cwt. was raised to eight annas nine pies per cwt. by the Emergency Surcharge of 1931. In 1933, the case of the Indian magnesium chloride industry came under examination along with certain other minor industries which had complained of unfair competition from Japanese imports due to the heavy depreciation of the Yen. Representations were made by the Pioneer Magnesia Works as a result of which the specific duty of 8 annas 9 pies per cwt. of magnesium chloride was raised to Rs. 1-5-0 per cwt. or 25 per cent. *ad valorem* whichever was higher under the Indian Tariff (Amendment) Act of 1934. Since the protection given to the magnesium chloride industry under the Heavy Chemical Industry (Protection) Act, 1931, was due to expire on 31st March 1939, the Government of India referred this question again to the Tariff Board in their Resolution No. 199-T(1)/37, dated 18th December 1937 asking the Board to examine whether any, and if so what, protective measures should be continued after 31st March 1939. The Board examined the question and recommended that protection to the industry should be extended for a further period of 7 years but that the specific duty should be reduced from Rs. 1-5-0 per cwt. to 15 annas per cwt. It also recommended that, if any attempt were made to import magnesium chloride at a price below Rs. 1-8-0 per cwt. c.i.f. Bombay, which would amount to dumping at an unremunerative price, action should be taken under Section 4(1) of the Indian Tariff Act of 1934 to prevent the protective duty from being ineffective. The Board also suggested that the Pioneer Magnesia Works, a private company, should convert itself into a public limited company. Government accepted the recommendation of the Board as regards the period of protection, but the amount of duty was reduced to 10 annas per cwt. This was given effect to by the Indian Tariff (Second Amendment) Act, 1939. The seven-year period of protection would have expired on 31st March 1946, but in view of the unsettled conditions then prevailing in the country, the protective duty was continued for one more year by the Protective Duties (Continuation) Act, 1946. Owing to the continuation of those unsettled conditions protection given to this industry was extended year by year, for a further period of two years. The present extension of protection expires on 31st March 1949.

Method of inquiry.

4. On 29th April 1948, the Board issued a questionnaire (Appendix I) the following principal producers and invited replies from them by 31st May 1948 :-

(1) The Pioneer Magnesia Works Ltd., Chartered Bank Building, Esplanade Road, Bombay.

(2) Tata Chemicals Ltd., Bombay House, Bruce Street, Fort, Bombay.

(3) The Mayurdhwaj Magnesia Works Ltd., Dhrangadra, Dhrangadra State, Kathiawar.

In their replies to the questionnaire, all the producers stated that, there being no imports, the industry was no longer in need of protection and that the protective duty could be safely removed. The same view was also expressed by the representative of the Pioneer Magnesia Works, who met the Board by invitation on 27th April 1948. The Board received a memorandum from the Indian Chemical Manufacturers Association, Calcutta, who were also of the same opinion. The Board also discussed the matter with the representatives of the Pioneer Magnesia Works on the 27th April 1948.

Process of manufacture.

5. (a) *At Kharaghoda.*—The process of manufacture of magnesium chloride (which may be considered a by-product of salt) at the Kharaghoda factory is a simple one and does not involve the employment of skilled labour or the use of elaborate and expensive machinery. The basic raw material used is 'Bitterns' which is the name given to the floating mother liquor left in the salt pans after the removal of the sodium chloride (common salt). This liquor which contains magnesium chloride, magnesium sulphate and comparatively small quantities of other salts, is collected in tins and brought to the Pioneer Magnesia Works by means of a motor rail wagon. At the factory the liquor is transferred to large reservoirs and allowed to evaporate for some days in the sun. The liquor is then made to flow into overhead tanks from which it is pumped into a

series of copper pans placed over furnaces. The temperature is gradually raised by the use of steam until the liquor reaches the final pan where it is boiled at a temperature of 162°C. When sufficient concentration has been obtained by the process of boiling, the resulting white waxy substance is run off into settling vessels and then poured into the galvanized drums where it gradually solidifies into a hard block. When filled to capacity, the drums are sealed. Magnesium chloride is now ready for the market in the 'fused' form. It may be noted that the demand for magnesium chloride is mainly for the solid 'fused' form. If crystallized magnesium chloride is required, the 'bitterns' should be boiled at a lower temperature. After the removal of magnesium chloride, there remains behind a quantity of 'sludge' which is dissolved in fresh water. The liquor thus formed is run off into troughs and allowed to stand for four days when crystallization takes place. This soluble magnesium sulphate (Epsom Salt) which is formed is sold as a derivative product. The liquor left over still contains a small proportion of magnesium chloride and is drained back into the reservoirs where it is used again for the recovery of residual magnesium chloride. It will thus be seen that, except in the process of evaporation and spillage, none of the 'bitterns' is lost.

(b) *Process of manufacture at Mithapur.*—The process of manufacture of magnesium chloride at Mithapur differs from the above-mentioned process followed at Kharaghoda. Instead of first separating magnesium chloride and then removing magnesium sulphate, the process is reversed. Sea-water, which contains an admixture of sodium chloride, magnesium chloride, magnesium sulphate, etc., is the primary raw material used. The required quantities of sea-water are obtained by means of a marine dam fitted with sluices and automatic gates operated by the action of the incoming and outgoing tides. The sea-water enters the sluice and passes by gravity successively through two marine tanks, each a mile long, and a large reservoir. From the reservoir the concentrated sea-water is led into preliminary condensers and after passing a distance of over two miles enters the high density condensers. The brine is kept moving in a zig-zag course and when it reaches a density of 28° Be is led into a long channel from which it is distributed to the crystallizing pans where the salt separates. The total distance over which the sea-water travels for the purpose of evaporation is 7 miles. The salt pans are so laid out as to collect by gravity the mother liquor or 'bitterns' from the salt pans at a central pumping station from which it is pumped out to the factory.

By means of a refrigeration plant the mother liquor is cooled to a lower temperature for the necessary crystallization of the magnesium sulphate. The magnesium sulphate crystals are centrifuged, re-dissolved in water, allowed to re-crystallize and then centrifuged and washed to get a final product of a high degree of purity. The mother liquor, after removal of magnesium sulphate, is next treated for the recovery of potassium chloride which is used as artificial manure. After the elimination of magnesium sulphate and potassium chloride, the liquor is ready for the manufacture of magnesium chloride. The liquor is passed through two preheating pans or kettles into a final 4-ton boiling kettle constructed of special steel and the temperature is raised to 161°C. In the process of boiling, small quantities of chemicals are added for the separation of impurities in the form of mixed salt containing kieserite and potassium chloride. When ready the liquor is drawn off and passed into a spherical container. At this stage it is bright saffron in colour. After bleaching and a short period of stirring by a mechanical stirrer, magnesium chloride emerges in its final white waxy form with a purity of 99 per cent. It is then run off into drums and is ready for the market in the solid fused form.

Uses of the product.

(a) Magnesium Chloride is used chiefly as a sizing material in the textile mills. All warp yarn before being taken to the loom-shed generally requires to be passed through a sizing mixture in order to keep the yarn pliable and soft and to enable it to stand the wear and tear better. As magnesium chloride is hygroscopic in character and possesses weight giving property, it is a very suitable and desirable sizing medium. The consumption of magnesium chloride in India at different textile centres varies mainly according to the texture of the cloth woven ; it depends upon the dryness or humidity found in the atmosphere. For example, at Ahmedabad where the climate is very dry and hot, and where much heavily sized cloth is woven, the consumption of magnesium chloride is proportionately much larger than in Bombay. It is also used in the dressing and filling of cotton and woollen fabrics ; as a lubricant in weaving calico, and in dyeing.

At present, magnesium chloride is not used in India as sizing material in the mills due to the Cotton Textiles Sizing and Filling Control Order, 1942, which is still in force.

(b) Magnesium chloride is used for a variety of purposes in other industries also. They are as follows :—

- (i) For use along with magnesite in the manufacture of oxychloride cement for the laying of jointless composition floors in buildings and railway wagons, and as a stucco in building works. Most of the foreign demand for the Indian product is for this purpose.
- (ii) For manufacture of tiles.

(iii) For grinding of machinery parts in rice mills.
(iv) For manufacture of beer, paper and ceramics.
(v) For making magnesium salts.
(vi) For various oxidation processes as a catalyst.
(vii) For fire-proofing of wood.

A possible new use for magnesium chloride has been found as an admixture in fire-proof paint.

Quality of the Indian Magnesium Chloride.

7. The three important factors in determining the quality are :—

(1) absence of free iron,
(2) refinement,
(3) colour.

As early as 1925, during the first Tariff inquiry, the Indian product was found to be satisfactory in respect of the first two factors, but as regards the colour, it was admittedly inferior to the German product. The Indian product had a greyish colour. Owing to this, the Indian mills had a prejudice against the indigenous material although it made no difference in use. The late Sir Frederick Stones, who then gave evidence before the Board, said that the colour did not make any difference whatsoever and that the Indian product was as good as the imported material. However, with the improvement in the process of manufacture towards 1937, the Indian producers were able to produce magnesium chloride which was equal in all respects including colour to the imported material.

Prices.

8. The price of the German magnesium chloride before the first world war was Rs. 3-8-0 per cwt. From 1915 to 1921, there was a serious shortage of supplies, and the price of magnesium chloride rose to Rs. 14 a cwt. There was a precipitous decline in price during the next two years ; it was Rs. 9-10-0 a cwt. in 1921-22 and Rs. 5-6-6 per cwt. in 1922-23. In 1928-29, the Havero Trading Co., was supplying magnesium chloride to the Sassoon Group of mills at Rs. 2-14-0 per cwt. As already mentioned, Germany enjoyed practically a monopoly in the production of magnesium chloride, and the whole of the imports of that commodity into India came from that country. This industry in Germany was controlled by a syndicate. An examination of the available data concerning the prices of magnesium chloride exported by Germany to Great Britain, Australia and India in 1929 reveals that the price quoted for the Indian market was lower than for other markets. This was so fixed deliberately with the intention of capturing the Indian market.

9. (a) *Growth of export trade.*—An approximate statement of export sales of magnesium chloride from 1926 to 1947 (22 years) by Pioneer Magnesia Works, as submitted by the firm, is given hereunder :—

Exports.

Year.	Drums	Tons	C. I. F. value. £	Average sales realization on c.i.f. basis per ton. £ sh. d.
1926—28	707	247	1,931	7 16 6
1929	1,544	517	2,507	4 17 0
1930	3,122	905	3,380	4 16 9
1931	3,034	893	4,140	4 12 9
1932	8,039	2,264	11,132	4 18 3
1933	6,069	1,857	8,494	4 11 9
1934	7,286	2,206	10,241	4 12 9
1935	7,348	2,333	10,664	4 11 6
1936	5,630	1,839	7,987	4 7 0
1937	6,712	2,164	9,712	4 10 0
1938	4,167	1,180	5,240	4 9 0
1939	5,585	1,639	10,422	6 7 3
1940	5,675	1,540	14,073	9 2 6
1941	2,777	824	10,158	12 6 6
1942	3,282	939	13,181	14 0 0
1943	1,744	486	7,659	15 15 3
1944	577	177	2,650	15 0 0
1945	556	150	2,072	13 16 3
1946	7,655	2,066	26,920	13 0 0
1947	15,531	4,715	64,336	13 12 9
22 Years	97,040	28,941	2,26,899	7 17 6

In Appendix II are given figures of exports of magnesium chloride, countrywise, made by the Pioneer Magnesia Works since 1937. It will be noticed from the Appendix that the bulk of the exports is to the U.K., the second place going to Holland. Magnesium chloride is also exported in small quantities to other European countries such as Denmark, Czechoslovakia, Australia, Canada and South Africa. It will also be observed from Appendix II that the annual exports of magnesium chloride from

India declined during the years 1943, 1944 and 1945. The main causes for the fall in exports as stated by the firm are as follows :—

(i) strict control over imports imposed in the U.K. ;
(ii) scarcity of shipping space ;
(iii) non-availability of iron sheets which were used for making the containers for packing magnesium chloride ;
(iv) stoppage of all exports to the continental countries.

Tata Chemicals have not been in a position to state how much of their product was exported prior to 1947, because Pioneer Magnesia Works was purchasing their entire production. During 1947, however, Pioneer Magnesia Works acting as agents for Tata Chemicals exported about 1,400 tons. The figures of exports by the Mayurdhwaj Magnesia Works are not available because they have begun to handle the export trade only this year. In future, the Company expects to export 50 to 100 tons.

There is considerable scope for the development of export trade in magnesium chloride. The foreign demand for this is not merely for use in the textiles but also for use as jointless composition flooring in the building trade. Since there has been so much destruction all over Europe, and since the German economy is altogether shattered and is under foreign domination, the industry feels that for a few years at least the demand for Indian magnesium chloride in foreign countries will steadily continue to the extent of a few thousand tons per annum. As regards foreign competition before the war, the most important country was Germany and the next, Japan. At present both of them are out of the picture. America also produces fairly large quantities of magnesium chloride, but it is mostly for domestic consumption. The industry apprehends a great potential danger from Palestine, which could produce magnesium chloride in large quantities.

(b) *Need for export drive.*—The total production capacity of the Indian industry is estimated to be 15,000 tons per annum. Under favourable circumstances, the industry could produce this amount, and after meeting the maximum demand in the country *i.e.*, 4,000 tons per annum, it would be in a position to export as much as 11,000 tons per annum. But, in 1947, the actual export was only 4,615 tons amounting to £59,423. Besides, Pioneer Magnesia Works is at present able to offer magnesium chloride in the U.K. market at about Rs. 10-0-3 per cwt., as compared with the prevailing price of Rs. 18-0-6 per cwt. for the local product.

Under these circumstances, we recommend that Government should give all possible facilities to the industry to develop its exports still further. This would help us in earning a sizable amount of foreign exchange.

Absence of foreign competition : continuance of protection not required.

10. (a) From available information we find that there have been no imports of magnesium chloride during the last six or seven years and that, therefore, the protective duty is, at present, of no significance. Germany and Japan, which were the two formidable rivals before the war, will not be in a position for some years to come, to offer any competition. Again, although the U.S.A. output of magnesium chloride is in fairly

large quantities, the Indian industry need not apprehend any competition from that country as its production is mostly for its home market. The industry has now sufficiently established itself and reached a stage when its product is exported in large quantities to the U.K., Holland and other countries. As a matter of fact, since imports have ceased and an export trade has been developed for some years past, the existing protective duty has become nominal. It is, therefore, clear that protection has fully achieved its purpose and is no longer required to be continued. And we recommend that the existing protective duty should be removed and a revenue duty imposed in its place

(b) Though an industry, once it has been established on a strong footing, under the stimulus of protection, should not normally require to be re-protected at a later stage, there may be special circumstances when re-imposition of protection may be called for and justified. Thus, for instance, when rapid technological changes are taking place in the manufacturing processes in foreign countries, the home industry may be unable, for reasons beyond its control, to re-organize itself as rapidly as its competitors. An industry may also have to be protected when there is a recurrence of unfair or unequal competition from abroad. The Indian Chemical Manufacturers' Association, Calcutta, in its memorandum submitted to the Board, has stated that when political stability is restored in Europe, it is quite likely that Germany may again be a competitor in the field and that imports may also come in appreciable quantities from Japan. Further, the industry also apprehends potential competition from Palestine. The industry, therefore, would welcome an assurance from Government that in the event of unequal competition from foreign countries, the question of protecting this industry would be favourably and expeditiously considered. We recommend that such an assurance should be given to the industry.

Existing rate of duty.

11. Magnesium chloride appears under item 28(5) of the First Schedule to the Indian Tariff Act XXXII of 1934 as in operation on 1st January 1948. The relevant extract from the Indian Customs Tariff (28th Issue) is given below :—

Item No.	Name of article	Nature of duty	Standard rate of duty	Preferential rate of duty if the article is the produce or manufacture of			Duration of protective duty
				The U.K.	A Br. Colony.	Burma.	
28(5)	**Heavy chemicals, the following, viz. Magnesium chloride**	**Protective**	**Twelve annas per cwt. or 25 per cent ad valorem whichever is higher plus one-fifth of the total duty.**	..	..	**12 per cent ad valorem**	**31st March 1949**

Proposed changes in the tariff schedule.

12. If our recommendation regarding the withdrawal of protective duty is accepted, the Import Tariff Schedule will have to be revised as follows :—

Item No.	Name of article.	Nature of duty.	Standard rate of duty.	Preferential rate of duty if the article is the produce or manufacture of			Duration of protective rate of duty.
				The U.K.	A. Br. colony.	Burma.	
28(5)	Heavy chemicals, the following viz. Magnesium chloride.	Revenue	Twelve annas per cwt. or 25 per cent ad valorem whichever is higher plus one-fifth of the total duty.	..	..	12 per cent ad valorem.	..

Other kinds of assistance to the industry.

13. (a) Though the industry does not require the continuance of protection, it has asked for the following assistance :—

(1) Railway priority for the movement of raw materials and goods.

(2) Special freight rates to various centres and ports.

(3) Adequate supply of raw materials for containers, pans, etc., such as, soda ash, cement, galvanized iron sheets and copper sheets and fuel including furnace oil, coal and firewood.

(b) As regards (1), we recommend that the question of granting such priorities should be favourably considered by the Railway authorities, if and when approached by the firm. As regards (2), since the industry is not at present exposed to foreign competition in the country, we do not see any ground for granting such special freight rates to the industry. As regards (3), the necessary supply of raw materials should be made available to the industry as far as practicable.

(c) Pioneer Magnesia Works holds a lease agreement with the Government of India for obtaining 'bitterns' from the Government Salt Works at Kharaghoda. The long-term agreement between Government and Pioneer Magnesia Works will expire on 31st December 1953 and the Company therefore requests that the 'bitterns' agreement should be renewed after 1953. This subject of the proposed renewal of agreement has been already taken up by the Company with the Salt Controller for India and the Director-General of Industry and Supply under whose purview salt with its derivatives and by-products falls at present. The Salt Controller in his letter dated 14th February 1948 to the Company has pointed out that the matter of the extension of the current lease involves certain important questions of policy, specially the question whether Government would continue to manufacture salt at Kharaghoda or retrocede to the States concerned the lands obtained from them to set up the saltworks. The firm in its reply to the questionnaire states that it has not installed any new plant and machinery in replacement of or in addition to the old plant because no assurance was forthcoming from Government regarding the renewal of the lease agreement. The firm contemplates further improvements in the manufacturing process and wishes to go ahead with its plan of expansion and of converting itself into a Public Limited Company with enlarged capital in the event of a renewal of the ' bitterns ' lease agreement with the Government of India. It is important that the present favourable position should be utilized to reorganize the industry so as to enable it to withstand foreign competition when it arises. We, therefore, recommend that Government should decide the question of the renewal of the lease as early as possible. We must, however, mention that the Pioneer Magnesia Works have shown considerable initiative and enterprise in developing this industry and that it has, therefore, a strong claim to a further renewal of the lease. Should Government decide in favour of renewing the lease to the present firm, such a renewal must be subject to the firm converting itself into a public limited company.

14. Our conclusions and recommendations are summarised as under :—

Summary of conclusions and recommendations.

(i) The production of magnesium chloride in India was 3,367 tons in 1945, 6,098 tons in 1946 and 6,267 tons in 1947. The total capacity of the indigenous industry at present is 15,000 tons per annum. [Paragraph 2(b)].

(ii) The Indian demand for magnesium chloride was 4,000 tons per annum before the war, but the present demand is only 2,000 tons. This sharp decline in the demand is due to the Cotton Textiles Sizing and Filling Control Order, 1942 promulgated by the Government of India during the war and it is still in force. If this order is withdrawn, there is bound to be a considerable increase in the indigenous demand for the product. [Paragraph 2(c)].

(iii) The principal raw material, namely ' bitterns ' is available in plenty in the country and its supply exceeds the quantity required for the magnesium chloride industry. [Paragraph 2(d)].

(iv) The process of manufacture of magnesium chloride is a simple one and does not involve the employment of skilled labour and the use of elaborate and expensive machinery. [Paragraph 5(a)].

(v) As regards quality, the indigenous product is equal in all respects to magnesium chloride produced in other countries. [Paragraph 7].

(vi) The bulk of the exports of magnesium chloride from India is to the United Kingdom. Holland is another important country to which India exports magnesium chloride. [Paragraph 9(a)].

(vii) There is a great scope for the development of the export trade in magnesium chloride. Government should give all possible facilities for the development of this export trade. [Paragraph 9(b)].

(viii) Before the war, Germany was the most important country which offered competition and the next formidable rival was Japan. At present, the industry is not faced with foreign competition. [Paragraph 10(a)].

(ix) The industry is no longer in need of protection and the present protection should be terminated. In the event of unequal competition from foreign countries, the question of protecting the industry would be favourably and expeditiously considered. [Paragraph 10(a)].

(x) If our recommendation regarding the withdrawal of the protective duty is accepted, the necessary changes in the Indian Tariff Schedule would be as shown in paragraph 12. (Paragraph 12).

(xi) As regards railway priority for the movement of goods, we recommend that the question of granting such priorities should be favourably considered by the Railway authorities, if and when approached by the firms. As regards special freight rates to various centres and ports, the industry is not at present exposed to foreign competition in the country and we do not see any ground for granting special freight rates to the industry. As regards adequate supply of raw materials for the manufacture of containers, it should be made available to the industry as far as practicable. [Paragraph 13(b)].

(xii) Government should decide the question of the renewal of the lease of 'bitterns' to Pioneer Magnesia Works as early as possible. Pioneer Magnesia Works has shown considerable initiative and enterprise in developing this industry; it has, therefore, a strong claim to a further renewal of the lease. [Paragraph 13(c)].

Acknowledgments.

15. We are very thankful to Pioneer Magnesia Works Ltd., Bombay, Tata Chemicals Ltd., Bombay and Mayurdhwaj Magnesia Works Ltd., Dhrangadra, Kathiawar, for their detailed memoranda submitted to the Board.

G. L. MEHTA, *President.*
H. L. DEY. *Member.*
B. V. NARAYANASWAMY, *Member.*

M. AHMADULLAH,
Secretary.

BOMBAY,
17th July 1948.

सत्यमेव जयते

APPENDIX I

Questionnaire issued by the Board to the producers of Magnesium Chloride.

1. How far has the industry benefited from protection granted so far ?

2. Is there any need for continuing protection of the industry for a further period ? Please give reasons.

3. Please state the quantity of each different product and by-product which your works, as at present equipped, could manufacture per annum.

4. What was the actual output of each different product and by-product from 1937 onwards ?

5. Do you consider that your products are equal in quality to imported products ?

6. Do your products command the same price in competitive markets as the imported article ? Please give figures.

7. Apart from the question of quality, is there any prejudice against your products on the part of any particular class of consumers ?

8. Have you adopted any new process of manufacture or have you installed new plant and machinery in replacement of or in addition to your plant since 1937 ? If so, give a brief description of the process or plant and state how far the results have fulfilled your expectations.

9. Do you contemplate any further improvement in the manufacturing process ? If so, please give a brief description of the process and estimate its effect on cost.

10. Please give the figures of total Indian production from 1937 onwards.

11. What do you estimate to be the total Indian demand for this article ?

12. Do you think that the demand will subsequently increase in the near future ? Please give reasons.

13. How much of your product is exported ? Please give a statement yearly for the past 11 years showing the countries to which the article is exported, and the quantity and value of export to each country.

14. To what extent is it possible to develop further the export market of your product ?

15. Which foreign countries are your keenest competitors in the Indian market ?

16. Is there any serious competition amongst Indian manufacturers in respect of the product you manufacture ? If so, who are your principal competitors ?

17. Has any attempt been made by Indian manufacturers to eliminate competition by mutual agreement ?

18. What are the special facilities which the industry requires at present ?

19. Do you consider that your plant is an economic unit ?

20. Do you require any assistance other than protective duty ? If so, please state what forms of assistance are required and the reasons for the same.

APPENDIX II

Statement of export of Magnesium Chloride by Pioneer Magnesia Works Ltd. (Export Dept.), Bombay, from 1937 to 30th April 1948.

Year		Great Britain		Holland.		Scandinavia.		Africa.		Australia.		Czechoslovakia.		Total Tons	Total Stg.
		Tons.	Stg. Value.	Tons.	Stg. Value.	Tons.	Stg. Value.	Tons.	Stg. Value.	Tons.	Stg. Value.	Tons.	Stg. Value.		
			£		£		£		£		£		£		
1937	..	1407	6228	619	2412	92·6	542	..	..	5·2	34	100·3	438	2224·1	9654
1938	..	854	3692	150·7	590	9·8	57	19·5	128	25·5	160	135·8	568	1195·3	5195
1939	..	1012	6767	438·4	1715	..	..	8·45	58	179	1735	..	..	1637·85	10275
1940	..	1173	11601	..	..	..	..	..	..	370	4282	..	..	1543	15883
1941	..	616	7495	..	..	..	..	37·35	705	210	2654	..	..	63·35	10654
1942	..	873	12066	..	..	..	..	25·9	391	39·9	626	..	..	938·8	13083
1943		400	5690	..	..	..	..	66·6	1600	19·8	324		..	486·4	7614
1944	..	145	1835	..	..	..	..	34	783	..	..	.	..	179	2618
1945	..	115	1406	..	..	..	..	14·6	326	19·9	340	..	..	149·5	2072
1946	..	898	10701	593·9	6282	550	8161	..	..	24·8	409	..	..	2066·7	25853
1947	..	2810	34872	1199	14643	413	6609	..	..	193	3299	..	..	4615	59423
1948 (upto 30th April)		1445	22320	..	..	50	877	..	..	57	1027	..	..	1552	24224
Totals	..	**11748**	**124673**	**3001·0**	**25642**	**1115·4**	**16546**	**206·4**	**3791**	**1144·1**	**14890**	**236·1**	**1006**	**17451**	**186548**

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